The First Suspicions Case of Congenital Microcephaly Associated with Zika Virus in Eastern Democratic Republic of Congo

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Introduction

The World Health Organization (WHO) in 2016, declaring the zika virus situation; as a public health emergency of international concern and placing it on the same priority list as the recent Ebola virus out break. Zika virus is a flavivirus that is primarily transmitted bys daytime- active mosquitoes of the aedes. Other routes of transmission have been reported including sexual transmission, oral and anal sex with low rates transmission. Zika virus was first identified in a rhesus macaque in the zika forest in Uganda in 1947, In 2016, 2.6 billion people living in the parts of Asia and Africa areas was at risk of zika virus infection, 4 million was infected by zika virus in the America, 1/3 of reported cases presented microcephaly in Brazil [1,2]. In the context of zika virus infection, the real need for consensus around the definition of microcephaly is most important for its in utero diagnosis specially in developing countries [3,4]. Guillain-Barré is an additional serious complication that may follow zika virus infection [5]. The Eastern Democratic Republic of Congo, because of the similar ecosystem with the Ugandan zika forest represents an area at risk of the transmission of this pathology in pregnancy. The objective of this report case is to recall and illustrate the fetal congenital microcephaly probably associated to zika virus infection in our country.

Case Observation

We describe a case of microcephaly associated probably with zika virus infection in newborn on 23 February, 2018 at North-Kivu Provincial Hospital in Eastern Democratic Republic of Congo. 26 years-older mother showed symptoms compatible with zika virus infection from Eastern Democratic Republic of Congo. Microcephaly was confirmed with a cephalic perimeter of 29.5 cm associated to muscular hypotonia and abolition primary reflexes. The baby was born at birth 39 weeks and 4 days. He has congenital microcephaly, head circumference 29.5cm, abnormal facies low Apgar score <7; respiratory disorder, bradicardia, muscular hypotonia and abolition of primary reflexes. Detection of zika virus by RT-PCR and zika virus IgM in umbilical card and serum of neonate were positive. Four hours later the newborn dead (Figure 1).

Abstract

Background: Zika virus infection is public health emergency in the world with 4 million people infected in America. The objective of this presentation is to recall and illustrate the fetal microcephaly associated to Zika virus infection in pregnancy.

Case Presentation: In our case report we illustrate fetal congenital microcephaly due to Zika virus infection at gestational term in a 26 years-old mother who showed symptoms compatible with zika virus infection from Eastern Democratic Republic of Congo. Microcephaly was confirmed with a cephalic perimeter of 29.5 cm associated to muscular hypotonia and abolition primary reflexes.

Conclusion: In Eastern of Democratic Republic of Congo, microcephaly needs to be monitored in order to detect zika virus infection. Zika virus infection should be evoked when congenital microcephaly is diagnosed in endemic countries. Mosquito control is the best available method for preventing Zika virus infection.

Keywords: Zika; Virus; Microcephaly; New Born

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During pregnancy, infection with zika virus has been associated with microcephaly and other fetal brain abnormalities [7,8]. The congenital microcephaly is detected between 20 and 40 weeks of gestation [6]. In our case report the first ultrasound was realized at 31 weeks. In Brazil, investigations observed abnormalities early at 21 weeks of gestation [8]. The mother can decide to interrupt her pregnancy if ultrasound abnormalities are detected soon. However, this decision is likely related to religious and cultural beliefs of many Congolese women who prefer to continue the pregnancy and Congolese law prohibits abortion. This problem was observed in Colombia and Brazil [9]. Between 2010 and 2017, neurologic complication as microcephaly in French Polynesia, Brazil; New-York city and Colombia have increased dramatically. The brain malformation in those countries coincided with zika virus outbreaks [5,10]. The relationship between zika virus and microcephaly was first suspected in Brazil in 2015 with 3893 reported cases of microcephaly in 2016 and the World Health Organization declared since, zika virus a global health emergency [6]. The Eastern of Democratic Republic of Congo needs for implanting future public health intervention to monitor fetal congenital microcephaly associated with zika virus.

Conclusion

We report for the first time a fetal microcephaly associated probably to zika virus infection in Eastern Democratic Republic of Congo, which needs to be diagnosed to detect fetal microcephaly in pregnancy. Mosquito control is the best available method for preventing zika virus infection. Breeding sites must be removed, destroyed frequently, emptied and cleaned or treated with insecticides.

Conflict Interest

Authors declare that there is non-conflict of interest regarding the publication of this paper.

Authors’ Contributions

All authors participated to this study, read and approved the final manuscript.

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References


